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DIRECTORATE OF  
INTELLIGENCE

# Intelligence Memorandum

*Soviet Capability to Absorb Middle Eastern Oil*

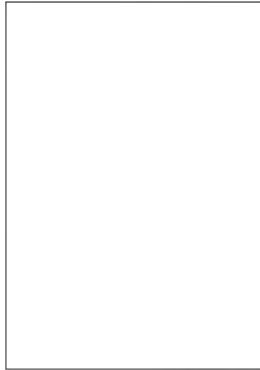
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**CENTRAL INTELLIGENCE AGENCY**  
Directorate of Intelligence  
July 1972

**INTELLIGENCE MEMORANDUM**

**SOVIET CAPABILITY TO ABSORB MIDDLE EASTERN OIL**

**Introduction**

1. Oil producing countries of the Middle East and North Africa are seeking to control a greater share of their oil industries. Negotiations currently are under way between Western oil companies and the Organization of Petroleum Exporting Countries (OPEC) on implementing 20% participation by OPEC members in oil company operations within their borders. Indeed, some oil producing countries already have taken unilateral action to achieve control. In April 1971, Algeria legislated a controlling interest over its entire petroleum industry. More recently Libya nationalized British Petroleum's (BP's) share of the Sarir oilfield and related facilities and Iraq nationalized the Iraq Petroleum Company's (IPC's) Kirkuk oilfield and related facilities. BP's share of the output of the Sarir field has been about 11 million metric tons per year - 225,000 barrels per day (bpd) -- and until April 1972 the Kirkuk field was producing at a rate of 50 million to 60 million tons per year (1.0 million to 1.2 million bpd). The key factor for the oil producing countries in seeking to gain control over their industries will be the ability of their national oil companies to market increasing quantities of oil.

2. The USSR has procured small quantities of crude oil from Egypt, Algeria, and Syria - some 3 million tons in 1971 - and has agreed to take 1 million tons from the North Rumaila field in Iraq in 1972. Almost all of this oil has been, or will be, shipped to foreign markets on Soviet account, primarily to other Communist countries. In recent weeks the USSR has agreed to acquire some 2 million tons (40,000 bpd) of Sarir crude oil during the next 12 months. Even more recently, the USSR and Iraq have signed an agreement on development of trade and economic relations. The details of this agreement have not been made public, but the Western press has speculated that perhaps the USSR has agreed to help market some of the Kirkuk oil.

3. This memorandum examines the capability of the USSR to consume or market Middle Eastern oil (a) in the very short run, (b) within two or three years, or (c) by the end of the 1970s.

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Note: This memorandum was prepared by the Office of Economic Research.

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### Conclusions

4. The USSR can be expected to seek political or economic advantage from the difficulties of international oil companies in the Middle East. However, its ability to import for domestic purposes or to market large quantities of Middle Eastern oil in Eastern or Western Europe in the next few years is not great.

5. Within a year the USSR might be able to import up to 5 million tons (100,000 bpd) of Middle Eastern oil and to market an additional 5 million tons in other Communist countries. By 1975, Soviet facilities probably could be constructed that would enable the USSR to import some 10 million tons per year (200,000 bpd) and possibly market an additional 10 million tons in other Communist countries. Western countries probably would not import sizable quantities of Middle Eastern oil with the USSR serving as broker. In any event the quantities of Middle Eastern oil that the USSR could acquire for any purpose would be small when compared with the present total Middle Eastern output of some 900 million tons per year (almost 18 million bpd) or even with the 80 million tons produced annually in Iraq.

6. The principal short-term constraint on the ability of the USSR to import Middle Eastern oil is the capacity of Soviet ports and distribution facilities. The ports have been geared to exports, not imports, and there is little excess capacity in storage, pipeline, and port handling facilities. As a result the system lacks flexibility, and a sizable import capability could not be developed for three or four years without sacrificing export capability.

7. Tanker capacity would not be a limiting factor in Soviet transport of Middle Eastern oil in the short run. Although the Soviet tanker fleet is fully committed in present oil trade, it could be supplemented by chartering non-Communist tankers, which are readily available.

8. In view of the USSR's continuing need for foreign exchange, any reversal of its position as a net exporter in the next two to three years is most unlikely. The volume of net exports has increased steadily, reaching some 100 million tons per year (2 million bpd) in 1971. Exports to the industrialized West - about 40 million tons at present - have become the largest single source of foreign exchange for the Soviet Union. Although serious problems in production must be overcome, through 1975 the USSR should be able to meet its own growing requirements for oil, supply most of the oil consumed in Eastern Europe, and still be able to export 45 million to 50 million tons per year to non-Communist countries.

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9. In the longer term the problem becomes one of basic Soviet oil policy. Trends in Soviet oil production and consumption in the late 1970s are uncertain because of unresolved technical problems, high development and pipeline costs, and lack of a firm long-term plan for energy production and use. By 1980, Soviet production may not be sufficient to maintain a high level of exports to non-Communist countries while satisfying the growing needs of the USSR and other Communist countries. In such a situation, larger quantities of Middle Eastern oil -- perhaps 30 million to 50 million tons -- could be acquired to help meet Soviet and East European needs.

**Discussion****Background**

10. The USSR is second only to the United States as a producer of crude oil in the world, and exports annually the equivalent of more than one-fourth of its oil output. In 1971, Soviet production was about 372 million tons (7.4 million bpd), some 15% of total world production and 23 million tons more than in 1970. During the 1960s, annual increases in production averaged nearly 20 million tons. In 1975, oil production is scheduled to reach 496 million tons (9.9 million bpd), a level that will require an average annual increase of 31 million tons during 1972-75. Most of the increase in oil production is to come from deposits in West Siberia and Central Asia; these deposits are costly to exploit because of the difficult climatic and terrain conditions involved and their remoteness from centers of consumption. Development of these resources will require modern technology and equipment, much of which may have to be imported from the West.

11. Since the mid-1950s the USSR has been a net exporter of oil. Exports rose from 8 million tons in 1955 to an estimated 101 million tons in 1971. This latter figure excludes some 3 million tons of crude oil obtained from the Middle East and North Africa and re-exported to other Communist countries on Soviet account. In 1971, approximately 55 million tons of oil were exported to other Communist countries, primarily Eastern Europe, and some 46 million tons to non-Communist countries (see Table 1). Deliveries to non-Communist countries had an estimated value of some \$685 million, of which about \$460 million was hard currency. Oil exports are the largest single source of foreign exchange for the USSR.

12. The Soviet position as a growing exporter of oil apparently has had no adverse effect on meeting the basic needs for oil at home. Although periodic shortages occur because of unusual seasonal demands, the overall

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Table 1  
Soviet Exports of Oil a/  
1971

|                        | Million Metric Tons |                           |              |
|------------------------|---------------------|---------------------------|--------------|
|                        | <u>Crude Oil</u>    | <u>Petroleum Products</u> | <u>Total</u> |
| Total                  | <u>70.6</u>         | <u>29.9</u>               | <u>100.6</u> |
| Non-Communist          | <u>26.1</u>         | <u>20.0</u>               | <u>46.2</u>  |
| Western Europe         | 23.0                | 16.2                      | 39.2         |
| Middle East            | 1.7                 | 1.9                       | 3.5          |
| Africa                 | 1.0                 | 0.4                       | 1.4          |
| Asia                   | 0.5                 | 1.5                       | 2.0          |
| North America          | 0                   | 0.1                       | 0.1          |
| Communist              | <u>44.5</u>         | <u>9.9</u>                | <u>54.4</u>  |
| Eastern Europe         | 39.2                | 5.5                       | 44.7         |
| Far East               | 0.1                 | 1.5                       | 1.6          |
| Cuba and<br>Yugoslavia | 5.2                 | 2.9                       | 8.1          |

a. These data exclude oil procured by the USSR from non-Communist countries and re-exported on Soviet account; such oil is excluded in official Soviet trade statistics. As part of an oil swap between the USSR and the British Petroleum Company (BP), some 800,000 tons of Soviet crude oil is being delivered to Sweden in exchange for a similar amount of BP oil (from Abu Dhabi) delivered to Japan on Soviet account. Because of rounding, components may not add to totals shown.

supply is adequate. Apparent domestic consumption is estimated to have been about 270 million tons in 1971 (5.4 million bpd) and should rise to about 360 million tons by 1975. Annual increments in consumption, which in recent years have averaged about 15 million tons, probably will increase to more than 20 million tons.

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Soviet Options in Disposing of Middle Eastern Oil

13. If the USSR were to acquire some Middle Eastern oil, its options would be (a) to use the oil domestically, (b) to ship it to Eastern Europe, (c) to attempt to market it in the West, or (d) a combination of these courses of action. Technical and economic constraints limiting Soviet ability to dispose of such oil would be considerably greater in the short run than in the long run.

Short-Term Technical Constraints

14. Most Soviet oil ports are believed to be operating at or near capacity, and it is doubtful that within a year they could accommodate imports of more than 5 million tons while maintaining present export levels. By 1975, capability probably could be extended to import some 10 million tons per year of Middle Eastern oil. The quantities mentioned would represent only 10% to 20% of the annual output of the Kirkuk field alone and are insignificant when compared with the present total yearly output of some 900 million tons in the Middle East.

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15. Some 48 million tons of oil were exported from the Black Sea in 1971 (see Table 2), mostly from four ports: Odessa, which is supplied by rail and barge, and Novorossiysk, Tuapse, and Batumi, which are supplied by pipeline and rail (see Table 3 and the map). Novorossiysk is the only Soviet oil port capable of handling tankers of up to 80,000 deadweight tons (DWT). None of the others can handle tankers larger than 50,000 DWT. In the Black Sea area an estimated 2 million tons of storage capacity (14 million barrels) is located in 18 different sites and is divided perhaps about equally between crude oil and refined products.

Table 2  
Method of Delivery of Soviet Exports of Oil  
1971

|                | <u>Million<br/>Metric Tons</u> | <u>Percent</u> |
|----------------|--------------------------------|----------------|
| Tanker         |                                |                |
| Black Sea      | 48                             | 47.5           |
| Baltic Sea     | 20                             | 19.8           |
| Far East       | 2                              | 2.0            |
| Pipeline       | 21                             | 20.8           |
| Rail and barge | 10                             | 9.9            |
| Total          | <u>101</u>                     | <u>100.0</u>   |

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Table 3

## Soviet Pipeline Network for Oil Export

|                                      | <u>Length<br/>(Miles)</u> | <u>Diameter<br/>(Inches)</u> | <u>Capacity<br/>(Million<br/>Metric Tons<br/>Per Year)</u> |
|--------------------------------------|---------------------------|------------------------------|--|
| Black Sea area                       |                           |                              |  |
| Baku-Batumi                          | 500                       | 28                           | 14-17  |
| Malgobek-Tikhoretsk                  | 310                       | 28                           | 14-17  |
| Tikhoretsk-Novorossiysk              | 155                       | 21                           | 6-8  |
| Tikhoretsk-Tuapse                    | 150                       | 21                           | 6-8  |
| Kremenchug-Kherson                   | 190                       | 28                           | 14-17  |
| Baltic Sea area                      |                           |                              |  |
| Polotsk-Ventspils                    |                           |                              |  |
| Crude                                | 310                       | 21                           | 6-8  |
| Products                             | 310                       | 21                           | 6-8  |
| Eastern Europe                       |                           |                              |  |
| Friendship crude oil pipeline system |                           |                              |  |
| Kuybyshev-Unecha                     | 797                       | 40                           | 35-45  |
|                                      |                           | 48 <u>a/</u>                 | 52-80 <u>b/</u>  |
| Unecha-Mozyr'                        | 181                       | 32                           | 20-24  |
| Mozyr'-Plock                         | 431                       | 24                           | 10-12  |
|                                      |                           | 28 <u>a/</u>                 | 14-17 <u>b/</u>  |
| Plock-Schwedt                        | 284                       | 20                           | 6-8  |
|                                      |                           | 24 <u>a/</u>                 | 10-12 <u>b/</u>  |
| Mozyr'-Uzhgorod                      | 454                       | 24                           | 10-12  |
|                                      |                           | 28 <u>a/</u>                 | 14-17 <u>b/</u>  |
| Uzhgorod-Bratislava                  | 256                       | 21                           | 6-8  |
|                                      |                           | 28 <u>a/</u>                 | 14-17 <u>b/</u>  |
| Sahy-Szazhalombatta                  | 83                        | 16                           | 3-4  |
| Sala-Zaluzi                          | 260                       | 16                           | 3-4  |
| Schwedt-Rostock                      | 126                       | 16                           | 3-4  |
| Schwedt-Halle                        | 210                       | 20                           | 6-8  |

a. Diameter of the second section of line, now under construction.

b. Capacity of the second section.

This map illustrates the oil infrastructure across Europe and the Middle East. A legend in the top left corner defines the symbols: a solid line for 'Oil Pipeline', a dashed line for 'Oil Pipeline Under Construction', a refinery icon for 'Oil Refinery', and a stippled area for 'Oil Producing Region'. The map shows a network of pipelines originating from the Caspian Sea and the Soviet Union, passing through Eastern Europe, and extending to Western Europe and the Mediterranean. Key cities and regions labeled include Sweden, Finland, Norway, Denmark, East Germany, West Germany, Poland, Czechoslovakia, Austria, Hungary, Yugoslavia, Romania, Bulgaria, Albania, Greece, Turkey, Syria, Iraq, Iran, Israel, Lebanon, Cyprus, and the USSR. Major oil-producing regions are indicated by stippled areas in the USSR and the Caspian Sea. Numerous refineries are marked with icons, and pipelines are shown as solid or dashed lines. The map also includes latitude and longitude lines and labels for the Baltic Sea, White Sea, Barents Sea, and the Mediterranean Sea.

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16. Ventspils and Klaipeda are the main oil export ports on the Baltic. In 1971, about 20 million tons of oil were shipped from these ports, approximately 20% of total Soviet exports of oil in that year. Ventspils is served by two pipelines and Klaipeda by rail. There is a total of about 600,000 tons of storage capacity (4.5 million barrels) in five sites in the Baltic area.

17. The Soviet tanker fleet is fully committed at present. Soviet vessels deliver most of the oil shipped by sea to other Communist countries and about half of the oil exported to non-Communist countries. Non-Communist tankers, most of them owned or chartered by importers, carry the other half of the Soviet oil moved to non-Communist countries. The availability of tankers, however, is not a constraint on Soviet movement of domestic oil or Middle Eastern oil in the short run, as non-Communist tankers are readily available for charter.\*

18. Even if sufficient port capacity were available to handle large amounts of Middle Eastern oil, internal distribution of the oil would be a problem. At present, the Soviet oil pipeline network is designed for distribution of domestically produced oil within the Soviet Union and for export. Approximately 30 million tons of crude oil and 15 million tons of products can be delivered to the Black Sea area by existing pipelines. Part of this pipeline capacity is used to supply crude oil to the refineries on the Black Sea. These refineries now have a combined capacity of only about 7.5 million tons per year (150,000 bpd) and hence would not be capable of processing any sizable quantities of Middle Eastern oil. Some 15 million tons of petroleum, divided equally between crude oil and products, can be delivered by pipeline to Ventspils on the Baltic. Thus, if the direction of flow of all existing pipelines to the port areas - including product lines - were reversed, they could carry up to 60 million tons of imported oil. Such reversal is not an easy matter. Moreover, present lines in the Black Sea area could only carry oil inland to three major refinery complexes that are located near important producing fields and that are now equipped to process local crude oils having a lower sulfur content than Middle Eastern oil. A shift to Middle Eastern oil would cause serious dislocations in the distribution system.

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\* As of the end of 1971, the USSR had 185 tankers with a total capacity of some 4.3 million DWT, the equivalent of 300 T-2 tankers, or approximately 2.5% of the world tanker fleet capacity. The entire Soviet tanker fleet could move 100 million to 120 million tons of Mediterranean oil to the Black Sea and 20 million tons of oil per year from the Persian Gulf to the Black Sea or to southern Europe via the Cape of Good Hope (perhaps 50 million tons if the Suez Canal were in service). Non-Communist tankers with a capacity of some 10 million to 20 million DWT are reported to be readily available for charter. Chartering these tankers would increase the Soviet capability for movement of oil by tanker by two to four times.

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19. Use of the Friendship oil pipeline system to supply Middle Eastern oil to Eastern or perhaps Western Europe would entail even greater dislocation. The capacity of the lines from Mozyr' in the USSR -- the most logical entry point for Middle Eastern oil -- to Eastern Europe is now about 21 million tons per year and is expected to reach 50 million tons by 1975-76. All of this capacity is fully committed to supplying Eastern Europe. Although only a small (perhaps 10% to 15%) of the Soviet tank car park would be required to move 50 million tons of oil from the Black Sea to the Friendship line, such use of facilities would make little sense. The capacity of the Black Sea ports would be clogged with imports, leaving little or no capability for export other than from the Baltic.

20. The simplest method of supplying Middle Eastern oil to Eastern Europe would be by tanker to Romania and Bulgaria on the Black Sea and to East Germany and Poland on the Baltic. In addition, delivery of Middle Eastern oil to the landlocked countries of Hungary and Czechoslovakia could be made through Yugoslavia via a pipeline that now is scheduled for completion within two to three years, and that ultimately is to have a capacity of about 20 million tons. Such deliveries of Middle Eastern oil to Eastern Europe would leave the Friendship pipeline and Soviet port facilities available for exporting Soviet oil. Middle Eastern oil transported to Eastern Europe in amounts greater than now planned could be substituted for Soviet oil, which, if market conditions permitted, could be exported to non-Communist countries. However, market conditions that would make oil delivered via the Friendship pipeline economically competitive in Western Europe are not likely to arise.

Short-Term Economic Constraints

21. The Soviet oil that has been successfully marketed in Western Europe has been shipped by tanker from the Black Sea or the Baltic. Delivery via the Friendship pipeline would be considerably more expensive than by tanker, and West European countries would purchase such oil only if they could not get Middle Eastern oil. Moreover, use of the pipeline for exports to the West rather than for export to Eastern Europe would constitute a major change, which the USSR might be reluctant to make. It has poured large investments into developing the system partly to forge closer ties between the East European and Soviet economies.

22. Oil producing countries in the Middle East undoubtedly wish to receive as much hard currency for their oil as possible. The Soviet Union would be unwilling to pay for significant quantities of Middle Eastern oil with hard currency, and the producers would not accept large amounts of Soviet goods and/or technical assistance as payment. Western countries that import Middle Eastern oil would not pay the USSR to act as middleman in delivery of oil from the Middle Eastern producers. The consuming

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countries probably would reach agreement with the Middle Eastern countries and receive oil directly from the producers before allowing a third party -- especially the Soviet Union -- to intervene in this extensive oil trade.

23. Eastern Europe has even more limited capability than the USSR to pay for Middle Eastern oil with hard currency. Most of these countries have agreements with such Middle Eastern oil producing countries as Iran, Iraq, and Syria to import small quantities of oil during the next several years with payment to be made in East European goods and technical assistance. The quantity of such goods and services that the oil-producing states would be willing to accept probably would not be great, as they have long been accustomed to payment in hard currency and to purchasing higher quality Western goods.

Short-Term Prospects

24. Although there are serious problems to be overcome, the Soviet goal for production of 496 million tons of oil in 1975 probably can be achieved. If it is, Soviet supplies will be adequate to meet domestic needs, to provide some 80 million tons to other Communist countries, and to export some 50 million tons to non-Communist countries. In view of this export surplus, little reason exists to expect the USSR to import for its own use any sizable quantities of Middle Eastern oil within the next two or three years. It might, however, be able to market 5 million tons of Middle Eastern oil in Eastern Europe within a year and to expand such deliveries to some 10 million tons per year by 1975. It is unlikely to attempt to market Middle Eastern oil, either in Eastern Europe or in non-Communist countries, under conditions that would reduce its net earnings of hard currency.

Long-Range Prospects

25. Soviet policy currently is directed toward maintaining self-sufficiency in petroleum. Plans call for the development of extensive deposits of oil in West Siberia, and a recent effort to interest US and Japanese firms in cooperating in their exploitation indicates a Soviet desire to continue to increase domestic output in the future. In the long run, the extent of Soviet interest in Middle Eastern oil will depend on the success achieved in developing indigenous petroleum resources. The difficult technical problems that must be overcome in developing the oil reserves of West Siberia and Central Asia suggest that unless there is heavy investment in modern technology and equipment -- and perhaps participation by Western oil companies -- production may not grow rapidly enough to keep pace with the growing demands of the Soviet and East European economies and at the same time to maintain a high level of exports to non-Communist countries. Should this be the case, the USSR and/or Eastern Europe might seek to acquire Middle Eastern oil, but the amounts, perhaps 30 million to 50 million tons, would be very small relative to total Middle Eastern output.